encoded by said polynucleotide, wherein said polypeptide produced comprises a polypeptide sequence which is at least 95% identical to the amino acid sequence of SEQ ID NO:2.

Remarks

The above amendment is clerical in nature and merely rectifies obvious typographical errors or clarifies the claims. Claims 21-54 are pending.

Claims 24 and 27 were asserted in the office action to be substantial duplicates, but such is not the actual case. Claim 24 is directed to a polynucleotide comprising a polynucleotide sequence having 95% identity to a polynucleotide encoding amino acids 1 to 352 of SEQ ID NO:2. By contrast, claim 27 is directed to a polynucleotide comprising a polynucleotide sequence encoding amino acids 1 to 352 of SEQ ID NO:2.

Accordingly, claims 24 and 27 are not duplicate claims and each is a proper claim of a different scope. Thus, the objection should be withdrawn.

With any admission or prejudice with regard to whether a deposit is necessary in the instant case (applicant asserts that such it is not necessary), for the convenience of the Examiner (as indicated above) a copy of the ATCC deposit viability form is provided herewith for ATCC Deposit No. 97183. The undersigned

certifies that ATCC Deposit No. 97183 is the same deposit referred to in the last full paragraph of page 6 of the specification as originally filed and the appended deposit viability form affirms that such culture is being maintained under terms of the Budapest Treaty. Further, applicants' representative certifies by the signature below the following:

The culture of ATCC 97183 will be maintained for 30 years after the date of deposit and will be replaced with a living culture if such should become destroyed or defective. Further, if a patent should issue which is directed to the present invention, upon the issuance of such a patent the deposited strain of ATCC 97183 will be irrevocably and without restriction released to the public, excepting for restrictions permitted to enforce the patent.

In view of the above, any issues related to insertion of the ATCC number, the contents of the deposit, or new matter are believe to be either moot or overcome.

In particular, the rejection under 35 U.S.C. §112 (rejection 8a) on pages 4 and 5 of the office action regarding the ability of one of ordinary skill to duplicate the deposited clone is deemed moot. The clone would be readily available to the public under the terms stated above. Thus, it would be unnecessary for one to duplicate the clone. Example 3 at page 39-41 explains how the cDNA may be obtained from the deposited clone and gives examples of

primer sequences. Accordingly, this rejection is overcome and should be withdrawn.

The rejection of claims 21, 22, 25, 28, 30-32, 34-36, 38, 39, 45-50, 52 and 53 under 35 U.S.C. §112 (rejection 8b) with regard to the term "mature" polypeptide is respectfully traversed. The meaning of the term "mature" in the context of the present invention is clear since the term is clearly defined in the specification.

A mature HDGNR10 protein (or polypeptide), as referred to in the specification, may be defined as a mature HDGNR10 polypeptide corresponding to SEQ ID NO:2 amino acids 2-352 (without including the redundant N-terminal methionine which is absent if the polypeptide is expressed in a eukaryotic cell in the manner that the naturally occurring mature protein is expressed) or to SEQ ID NO:2 amino acid 1-352 (which includes the redundant N-terminal methionine which may be present when the polypeptide is expressed in a bacterial host, for example, that sometimes does not cleave the N-terminal methionine).

As presented in the specification the polypeptide according to the invention may be obtained from a host cell by being expressed with a secretion sequence or other leader sequence which can be removed to yield the mature polypeptide (for example, see page 7 of the specification, at paragraphs 2 and 3). Also, as noted in the paragraph bridging pages 8 and 9 of the specification the

polynucleotide of the invention may include a fused marker sequence that will permit purification of the polypeptide, which marker sequence can be removed to produce the mature polypeptide after purification of the polypeptide. Thus, the term mature refers to the polypeptide sequence obtained after such additional sequence, or sequences is/are removed. For example, see page 8 of the specification, at the first full paragraph, for a definition of the term "mature" polypeptide.

For the above-stated reasons, the above rejection regarding the term "mature" is believed to be adequately rebutted and overcome. Accordingly, removal of this ground of rejection is respectfully urged.

Claims 38 and 39 were rejected under 35 U.S.C. §112 (rejection 8d), as lacking enablement due to structural considerations. This rejection is believed to be rendered moot by the above amendment to the subject claims which requires the resulting polypeptides to comprise an amino acid sequence having at least 95% identity to SEQ ID NO:2. See, for example, page 12, lines 6-20, for a description of polypeptides having at least 95 percent identity to SEQ ID NO:2.

Claims 21-22, 25, 28, 30-32, 34-36, 38 and 40 were rejected under 35 U.S.C. §112, first paragraph, as lacking enablement because of the term HDGNR10 in the claims. The Office Action has taken the position that the term HDGNR10 does not describe the

structure of a polypeptide, per se, however, applicant respectfully disagrees with the Office Action position in view of the following.

Page 1 of the specification, at lines 5-9, defines **HDGNR10** as "[T]he polypeptide of the present invention is a human 7-transmembrane receptor which has been putatively identified as a chemokine..." Thus, in view of the above definition, the phrase "the polypeptide according to the invention" and the term "HDGNR10" are interchangeable, equivalent terms. The coding sequence which encodes the "mature polypeptide according to the invention" (**i.e. "mature HDGNR10"**) is defined, for example, on page 7 of the specification at lines 11-18, as:

> "The coding sequence which encodes the mature polypeptide may be identical to the coding sequence shown in Figure 1 (SEQ ID NO:1) or that of the deposited clone [ATCC 97183] or may be a different coding sequence which coding sequence, as a result of redundancy or degeneracy of the genetic code, encodes the same mature polypeptide [mature HDGNR10] as the DNA of Figure 1 (SEQ ID NO:1) or the deposited cDNA."

[Cross-references of interchangeable terms are added to the above quote in brackets to clarify the definition.] Thus, the above definition adequately defines a structure that is simply interchangeable with the phrase a "a polynucleotide which encodes (1) a mature polypeptide according to the invention or (2) a mature HDGNR10 protein."

The Examiner will note that claim 21 and the claims depending therefrom all use, when applicable, the phrases "mature HDGNR10 protein" or "mature HDGNR10 polypeptide" instead of the bare term "HDGNR10." Thus, the meaning of the phrases "mature HDGNR10 protein" and "mature HDGNR10 polypeptide" are the real issue not the meaning of the term "HDGNR10," *per se*.

Accordingly, the phrase "a polynucleotide encoding the mature HDGNR10 protein" is adequately cross-referenced with a structure and is clearly defined in the specification. Although, portions of the definition may be located in several different places within the specification, none-the-less the phrase is clearly defined within the four corners of the specification when the phrase is broken into its component terms.

If the Examiner would like for the specification to be amended to pull the component terms into one location and thus define the term "mature HDGNR10 protein" in one location, applicant would consider such an amendment. Of course, such an amendment (while redundant) would not be new matter because it would simply relocate portions of the specification into one spot.

Claims 21-22, 25, 28, 30-31, 34-35, 38 and 40 were rejected under 35 U.S.C. §102(b) since the patent office for the reasons addressed in the 35 U.S.C. §112 rejection regarding "mature HDGNR10 polypeptide" or "mature HDGNR10 protein" did not appreciate the cross-references of such terms with the sequence listing, figures

and deposited clone in the specification. In view of the above discussion, it is believe that the Examiner will agree that the presently claimed structures are free of the prior art. Accordingly, this ground of rejection should be withdrawn.

Applicant appreciates that claims 24, 27, 29, 33, 37 and 39 would be allowable if rewritten to overcome the formalities set forth in the Office Action. Such is believed to be accomplished by the above amendment and clarifying remarks. Further, applicant appreciates the Examiner's indication that claims 23-24, 26-27, 29, 32-33, 36-37, 39 and 41-54 are free of the prior art. For the reasons noted above, applicant believes that the Examiner will agree that all of the present claims are free of the prior art.

For the above stated reasons, in view of the above amendments, this case is believed to now be in condition for allowance. An early notice to that effect is urged.

The Examiner is invited to call the undersigned at the below number if any further action by applicant would expedite the examination of this application.

FIRST CLASS MAIL CERTIFICATE

Deposit date: June 10, 1997

I hereby certify that this paper and the attachments hereto are being deposited with the U.S. Postal Service "First Class Mail" service under 37 CFR 1.10 on the date indicated above addressed to:

Box Amendment - Fee Due
Assistant Commissioner for Patents
Washington, DC 20231

J.G. Mullins, Esq. — Date 6/10/97

Respectfully submitted,

J.G. Mullins, Esq.
Reg. No. 33,073

CARELLA, BYRNE, BAIN, GILFILLAN,
CECCHI, STEWART & OLSTEIN
Six Becker Farm Road
Roseland, NJ 07068
Tel. No.: (201) 994-1700

N:\H\HGS-AMD.449